WHAT IS CLAIMED IS:

1.   An inspection system comprising:

a rotating prism having a first end and a second end, where the first end receives a first image area and rotates about a center point so as to cover a field of view area that is larger than the first image area, and the second end remains centered on the center point and provides the first image to a view area that has constant dimensions; and

an image data system disposed at the second end of the rotating prism, the image data system generating image data as the prism rotates so as to generate two or more sets of image data from the field of view area.

2.   The system of claim 1 further comprising a support holding the rotating prism.

3.   The system of claim 2 wherein the support further comprises one or more lighting elements.

4.   The system of claim 2 wherein the support further comprises a plurality of lighting elements disposed around a periphery of the support.

5.   The system of claim 1 further comprising a quadrant inspection system coupled to the image data system, the quadrant inspection system receiving image data from one of four quadrants of the field of view area.

6.   The system of claim 1 further comprising a prism rotation controller coupled to the rotating prism, the prism rotation controller setting the rotation speed of the prism.

7.   The system of claim 1 further comprising an image data acquisition control coupled to the image data system, the image data acquisition control setting an image capture rate.

5

8.   The system of claim 1 further comprising a quadrant data analysis system receiving the image data and generating die quadrant image data.

9.   The system of claim 1 further comprising a die

10   identification system receiving the image data and generating die image data.

10.   The system of claim 1 further comprising a component identification system receiving the image data and

15   generating component image data.

11.   The system of claim 1 further comprising a component inspection system receiving the image data and generating component pass/fail data.

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12. A method for inspection comprising:

receiving image data of a first area from a prism;

generating first area image data;

rotating the prism;

5   receiving image data of a second area from the prism;

generating second area image data.

13. The method of claim 12 further comprising:

receiving image data of a third area from the prism;

10   generating third area image data;

rotating the prism;

receiving image data of a fourth area from the prism;

generating fourth area image data; and

wherein an item is inspected using the first area image

15 data, the second area image data, the third area image data,

and a fourth area image data.

14. The method of claim 13 wherein the item is a
semiconductor die.

20

15. The method of claim 13 wherein the first area image
data corresponds to a first quadrant of a semiconductor die,
the second area image data corresponds to a second quadrant
of the semiconductor die, the third area image data
25 corresponds to a third quadrant of the semiconductor die, and
a fourth area image data corresponds to a fourth quadrant of
the semiconductor die.

21

16. A method for inspecting a semiconductor die comprising:

receiving image data of a first area from a prism;

generating first area image data that includes a first
5   section of the semiconductor die;

rotating the prism;

receiving image data of a second area from the prism;

generating second area image data that includes a second
section of the semiconductor die.
10

17. The method of claim 16 wherein the first section
and the second section are each quadrants of the
semiconductor die, and the prism is further rotated to
generate image data of all four quadrants of the
15   semiconductor die.

18. The method of claim 16 further comprising rotating
the second area image data to align with the first area image
data.
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19. The method of claim 18 further comprising
eliminating overlapping sections of the image data.

20. The method of claim 16 further comprising analyzing
25   the second area image data based on a predetermined angular
relationship to the first area image data.

22